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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,789

01/13/2006

Tomoyuki Horiguchi

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EXAMINER

GUGLIOTTA, NICOLE T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,789	Applicant(s) HORIGUCHI ET AL.	
	Examiner NICOLE T. GUGLIOTTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-40, 42 - 48 is/are pending in the application.
4a) Of the above claim(s) 1 - 28, 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 29 - 40, 42 - 48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/30/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 7/30/2008 has been entered.

Examiner's Notes

2. Examiner acknowledges claims 1- 28 have been cancelled.
3. Examiner acknowledges amendments made to claims 29, 33 39, and 40.
4. Examiner acknowledges applicant's change of title.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 29 – 32, 39 – 40, and 42 - 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (U.S. Patent No. 6,566,287).

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7. In regard to claim 29 - 32, Mimura et al. disclose forming nonwoven fabrics from staple (corresponds to applicant's "short fiber") splittable bicomponent fibers (Col.1, Lines 8 – 13), that are entangled (Col. 3, Lines 1 – 10), whereby the fibers comprise islands of polyamide (Col. 19, Lines 25- 30) or polyester (Col. 20, Lines 6 – 10) and a dissolvable sea of polyethylene. The unsplit fiber density is 5.3 denier (5.8 dtex), and the ultra-fine fiber is 0.14 denier (0.16 dtex) (Col. 20, Lines 33 – 35). The nonwoven fabric weighs 400 - 500 g/m² with densities of 0.33 - 0.34 g/cm³ (Col. 18, Lines 35 - 40 & Col. 20, Lines 20 - 25). The tensile strength of one ultra-fine fiber sheet formed with impregnation polyurethane of dissolved polyurethane was 11.9 kg/cm (116.7 N).
8. Mimura et al. disclose 0 – 50 wt% elastic polymer within their nonwoven fabric (Col. 10, Lines 39 – 53). This range overlaps applicant's claimed range.
9. Mimura et al. is silent in regard to the 10% modulus and tear strength of the fabric.

10. <i>Characteristic</i>	11. Mimura et al.	12. Applicant
13. <i>fiber deniers</i>	14. 0.14 - 3.3 deniers (0.16 – 3.7 dtex)	15. 0.0001 – 0.5 dtex
16. <i>fabric weight</i>	17. 400 – 500 g/m ²	18. 100 – 550 g/m ²
19. <i>apparent density</i>	20. 0.331 - 0.45 g/cm ³	21. 0.280 – 700 g/cm ³
22. <i>tensile strength</i>	23. 11.5 kg/cm (112.7 N/cm)	24. 70 - 200 N/cm
25. <i>materials</i>	26. Polyethylene terephthalate, nylon-6, polystyrene, polyurethane	27. Polyethylene terephthalate, nylon-6, polystyrene polyurethane
28. <i>hydroentanglement orifice size</i>	29. 0.05 – 0.5 mm	30. 0.06 – 0.15 mm
31. <i>process</i>	32. needle-punching & hydroentanglement	33. needle-punching & hydroentanglement

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34. However, the fabric of Mimura et al. disclose the same polymers with the same characteristics as that of the immediate application. Therefore, it can be reasonably assumed the fabric of Mimura et al. also has the same modulus and tear strength.

35. In regard to claims 39 – 46, Mimura et al. disclose leather-like sheets comprising ultra-fine nonwoven fabrics. The unsplit fiber density was 5.3 denier (5.8 dtex) and the ultra-fine fiber density was 0.14 denier (0.16 dtex) (Col. 20, Lines 33 - 35). The fabric weight was 483 g/m^2 , apparent density was 0.4 g/cm^3 , and the tensile strength was 11.9 kg/cm (129.5 N/cm). (Col. 20, Lines 55 - 56). Mimura et al. further disclose techniques for altering (raising) a surface to mimic a grain layer (Col. 12, Lines 6 - 23 & Col. 15, Lines 46 - 61).

36. Claims 33 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al., in view of Okamoto et al. (U.S. Patent No. 3,716,614).

37. In regard to claims 33 – 37 Mimura et al. disclose a method of making nonwoven fabric by first needle-punching cross-lapped carded fabrics and then hydroentangling (Col. 6, Lines 44 – 46). The water pressure of the jets is up to 200 kg/cm^3 (19.5 MPa) (Col. 6, Lines 55 – 58). The apparent density of the nonwoven web is $0.18 - 0.4 \text{ g/cm}^3$ (Col. 3, Line 60). The orifices of the hydroentanglement manifold have a diameter of $0.05 - 0.5 \text{ mm}$ (Col. 6, Lines 58 - 60). When the fabric is in contact with the jets it may be dried (Col. 6, Lines 60 - 63), or further slit (Col. 9, Lines 39 - 41 & Col. 9, Lines 59 - 61).

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38. Okamoto et al. disclose “it is well-known that ‘islands-in-a-sea’ type of composite filaments are useful for preparing superfine filament bundles by removing the sea constituent so that only the superfine filamentary island constituents remain” (Col.2, Lines 1 - 6). Okamoto et al. disclose the sea may be polyethylene oxide (Col. 6, Lines 43 - 44) and the islands may be composed of nylon 6, 66, 610,12, or 2, among other compounds (Col. 6, Lines 21 - 34).

39. It would have been obvious to one skilled in the art at the time the invention was made to improve the smoothness of the artificial leather of Mimura’s invention by adding the additional step of removing the sea component to achieve superfine filament bundles, as disclosed by Okamoto. In regard to the order of the method steps (needle-punching, removing the sea, and hydroentanglement), it has been well established that the arrangement of steps in a method is considered to be a *prima facie* case of obviousness. See MPEP 2112.04 [R-6] IVC.

40. In regard to claim 38, the pressing values claimed by applicant is a result effective variable.

41. Claims 47 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al., in view of Katayama et al. (U.S. 6,537,660 B2).

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42. Mimura et al. disclose ultra-fine nonwoven web for artificial leather comprising splittable nylon and polyester fibers, but is silent in regard to the limitation of ultra-fine fibers containing particles of micron size.

43. Katayama et al. disclose ultra-fine splittable nonwoven fabrics for leather (or suede)-like sheets comprising fibers of polyester or polyamide and entangled through needle-punching or water-jets. The fibers contain particles sizes of 0.01 - 5 um for use as stabilizers, lubricants, absorbers, antioxidants, antistatic agents, flame retardants, plasticizers, colorants, and crystallization governors (Col. 6, Lines 44 - 60).

44. It would have been obvious to one skilled in the art at the time the invention was made to include particles of micron size in nonwoven fabrics of ultra-fine fibers. The motivation would be to alter the properties of the fibers and fabrics according to the properties of the additives (Katayama et al., Col. 6, Lines 44 - 60).

Double Patenting

45. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ

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619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

46. Claims 40 & 42 – 28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/522,519 (US 2006/0035556 A1) to Yokoi et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim dyed artificial leather comprising entangled ultra-fine polyester fibers containing particular pigments.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

47. Applicants argue “Mimura fails to disclose a process that is even close to the subject matter recited in claim 33” (Remarks, Page 6).

48. Applicant's arguments with respect to claim 33 have been considered but are moot in view of the new ground(s) of rejection.

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49. Applicants argue "the punching density of Mimura is no more than 77 needles/cm² as seen in Example 1. Such a needle-punching process is only for temporary binding of the fibers and does not achieve strong entanglement as in the Applicant's claimed subject matter" (Remarks, Page 8).

50. Applicant's arguments filed 6/19/2008 have been fully considered but they are not persuasive. The needle-punching density is a product-by-process claim. In addition, the product formed by Mimura et al. essentially has the same entanglement. Mimura et al. discloses the splitting rate of the fibers contained in the non-woven fabric was 95% or higher (Examples 1 and 2). Therefore, the final product is the same as applicants.

51. "Applicants have further amended Claims 29, 39, and 40 to recite that there is less than 10 wt% of elastomer contained within a nonwoven fabric. This is also a different approach from Mimura which discusses 'impregnating' the obtained nonwoven fiber with elastic polymer in various location. ...This impregnation step leads those skilled in the art to understand that a substantial quantity of elastic polymer should be employed" (Remarks, Page 8).

52. Applicant's arguments filed 6/19/2008 have been fully considered but they are not persuasive. First, Mimura et al. disclose 0 – 50 wt% elastic polymer within their nonwoven fabric (Col. 10, Lines 39 – 53). This overlaps with applicant's claimed range. Second, no quantitative value for the amount of elastic monomer used by Mimura et al. can be implied from the term "impregnated" alone.

53. Applicants' argue the combination of Mimura with Honda and/or Katayana fail to result in the subject matter of respective claims (Remarks, Pages 8 – 9).

54. Applicant's arguments filed 6/19/2008 have been fully considered but they are not persuasive. The motivation to combine Mimura et al. with Honda or Katayana has not been argued by applicant.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE T. GUGLIOTTA whose telephone number is (571)270-1552. The examiner can normally be reached on M - Th 8:30 - 6 p.m., & every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NICOLE T. GUGLIOTTA
Examiner
Art Unit 1794

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794